ATTACHMENT B

Biological Resources Technical Report

DRAFT

Biological Resources Technical Report for the Upper and Lower SLRWRF Recycled Water Conveyance System City of Oceanside, California

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SUMMARY OF FINDINGS

The City of Oceanside is expanding the production and conveyance of recycled water to reduce dependence on imported water supplies, improve water supply reliability, develop a diverse portfolio of water resources. The proposed project would construct water reservoir and pump station facilities and delivery pipelines to serve the City.

Dudek surveyed the project area, including the facility sites and pipeline alignment, to assess the potential effects of the project on biological resources in order to support Addendum No. 3 to the Programmatic Environmental Impact Report (PEIR) prepared for the regional North San Diego Water Reuse Coalition Regional Recycled Water Project. A majority of the project area occurs in areas characterized by developed, disturbed habitat, ornamental landscaping, and fallow agriculture, which provide minimal value for biological resources. Sensitive vegetation communities occur adjacent to the project area throughout the City that have the potential to support special-status plant and wildlife species.

The proposed project would result in direct impacts to 0.14 acres of non-native grassland. All other direct impacts from project construction would occur in developed areas, disturbed habitat, ornamental landscaping, and fallow agriculture. Measures to avoid and minimize impacts from the proposed project on adjacent biological resources would be implemented, and mitigation measures would be implemented pursuant to the PEIR to compensate for unavoidable impacts.

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1 INTRODUCTION

The City of Oceanside (City) is expanding the production and conveyance of recycled water to reduce dependence on imported water supplies, improve water supply reliability, and allow the City to meet its strategy of developing a diverse portfolio of water resources.

The City's 2015 Integrated Master Plan Recycled Water Master Plan (2015 RWMP) proposes expanding tertiary recycled water treatment capacity at the San Luis Rey Water Reclamation Facility (SLRWRF) from 0.7 MGD to 3.0 MGD initially and up to 6.0 MGD in the future and creating two distribution systems, referred to as the Lower SLRWRF and Upper SLRWRF systems. Expansion of the City's recycled water system as defined by the 2015 RWMP is included in the North San Diego Water Reuse Coalition Regional Recycled Water Project Final Program Environmental Impact Report (PIER) and subsequent addenda to the PEIR, both adopted by the City. This Biological Resources Technical Report was developed to support the Addendum No. 3 to the PEIR for the Upper and Lower SLRWRF recycled water conveyance system expansions, which includes the backbone pipeline network, storage reservoirs, and pump stations outside of the SLRWRF site.

Biological surveys of the project areas were conducted by Dudek in late 2017 and 2018 to document existing biological conditions with the pipeline alignments and facility sites. The purposes of this report are to describe the biological character of the project areas in terms of vegetation, flora, wildlife, and wildlife habitats; analyze the potential for biological impacts of the proposed project; and discuss approach to implementing avoidance, minimization, and mitigation measures that would reduce impacts to biological resources below a level of significance consistent with the PEIR for the project.

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2 METHODS

Information regarding biological resources present on the project site was obtained through literature review, a planning-level biological review, and field reconnaissance, which are described below.

2.1 Literature Review

Sensitive biological resources present or potentially present on site were identified through a literature search using the following sources:

- CDFW California Natural Diversity Database for the City of Oceanside (CDFW 2018a)
- USFWS Critical Habitat Data and Species Occurrence Data within the city (USFWS 2018)
- California Native Plant Society's (CNPS) Online Inventory of Rare and Endangered Vascular Plants for the city (CNPS 2018)
- North San Diego Water Reuse Coalition Regional Recycled Water Project PEIR (RMC 2015).
- Final Oceanside Subarea Plan (City of Oceanside 2010)

2.2 Planning-Level Biological Review

As part of the site selection and design process for the proposed project, an Environmental Compliance and Mitigation Technical Memorandum (TM; Dudek and NV5 2017) was prepared to review the adopted PEIR, MMRP, Findings of Fact and Statement of Overriding Considerations, and other applicable City rules and ordinances with respect to facility sites and pipeline alignments. In preparing the TM, Dudek biologists conducted a planning-level biological review of the project areas. This planning-level biological review included a review of aerial imagery and pertinent geographic information system (GIS) data to identify potential biological constraints and where avoidance, minimization, or mitigation pursuant to the PEIR would potentially apply. This planning-level biological review provided Dudek biologists a greater familiarity with the project areas and resources ahead of subsequent field reconnaissance.

2.3 Field Reconnaissance

A majority of the proposed project area occurs along existing paved roadways of the city where the pipeline would be installed. In addition to pipelines within existing roadways, the project area includes several facility sites. These pipeline alignments and facility sites were initially assessed as part of the planning-level biological review described above in Section 2.2. The purpose of field reconnaissance for this project was to (1) survey project areas in undeveloped/natural areas

for biological resources and (2) identify sensitive areas for avoidance in and adjacent to project areas. For the purposes of field reconnaissance of the facility sites, survey areas included the entire site. For the field reconnaissance of the pipeline alignment, the entire alignment was surveyed from a vehicle to identify potential sensitive resources visible from the public right-of-way within approximately 100 feet of the roadway centerlines. Dudek biologists Katie Dayton and Mike Howard conducted biological surveys of the pipeline and facility sites in late 2017 and 2018. Survey timing, focus, and weather conditions are shown in Table 1.

Table 1
Survey Dates and Conditions

Date	Time	Personnel	Focus	Weather Conditions
9/15/2017	0945-1045	K. Dayton	Pipeline U8 field reconnaissance	Not recorded
12/21/2017	0845-0945	M. Howard	General biological survey of Morro Heights facility site	48-52°F, 0% cc, 5-10 mph winds
12/27/2017	0900-1015	M. Howard	General biological survey of Fire Mountain facility site	50-60°F, 0% cc, calm winds
6/14/2018	0830-1400	M. Howard	Sensitive vegetation mapping along pipeline alignment and facility sites	Not recorded

2.3.1 Resource Mapping

A majority of the proposed project area (i.e., facility sites and pipeline alignment) occurs in developed areas (roadways), disturbed areas (road shoulders, dirt lots), ornamental landscaping areas, and fallow agriculture. These land covers are not considered biologically sensitive and impacts to these land covers would not require avoidance, minimization, or mitigation under the PEIR; therefore, mapping of these land covers was not conducted for this project. Natural vegetation communities potentially subject to PEIR avoidance, minimization, or mitigation requirements or potentially suitable to support special-status species were mapped. Vegetation communities were mapped in the field using aerial photograph based field maps and data collection tablet. Vegetation community classifications follow Holland (1986) as modified in the Draft Vegetation Communities of San Diego County (Oberbauer et al. 2008), which is consistent with the Oceanside Subarea Plan and PEIR. Drainage features in the project area potentially regulated by the Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and/or California Department of Fish and Wildlife (CDFW) were also mapped.

2.3.2 Flora and Fauna

Plant and animal species detected during site surveys were recorded and habitat suitability for special-status species was assessed. Latin and common names for plant species with a California

Rare Plant Rank (CRPR; formerly CNPS List) follow the *California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2018). For plant species without a CRPR, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2018) or the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2018). A cumulative list of plant species observed in the project site is presented in Appendix A. Latin and common names of animals follow Crother (2012) for reptiles and amphibians, American Ornithologists' Union (AOU) (2018) for birds, Wilson and Reeder (2005) for mammals, North American Butterfly Association (NABA) (2016) or SDNHM (2002) for butterflies, and Moyle (2002) for fish. A cumulative list of wildlife species observed in the project site is presented in Appendix B.

2.3.3 Survey Limitations

The primary purpose of the literature review, planning-level biological review, and the field reconnaissance was to identify the biological resources potentially subject to the avoidance, minimization, or mitigation measures of the PEIR to support development of Addendum No.3 to the PEIR. As such, the field reconnaissance effort was limited to resource mapping and recordation of potentially sensitive biological resources in or immediately adjacent to the proposed project area that would require avoidance or mitigation pursuant to the PEIR. Because sensitive resources that would require specialized surveys would be completely avoided by the proposed project, formal wetland delineation, rare plant surveys, and protocol wildlife surveys were not necessary.

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3 ENVIRONMENTAL SETTING

The proposed project area includes the proposed upper and lower SLRWRF recycled water (RW) pipeline alignments and four facility sites in the City of Oceanside, San Diego County, California. The upper SLRWRF RW pipeline includes the pipeline system serving the northeastern portion of the city east of the San Luis Rey Water Reclamation Facility. The lower SLRWRF RW pipeline includes the pipeline system serving the central portions of the City from the reclamation facility south and east (Figure 1). The four proposed facility sites include the Fire Mountain site, Mesa Pump Station site, Morro Heights site, and Old Grove site (Figure 1).

The proposed Fire Mountain site is located on a 5.7-acre City-owned parcel with an existing Fire Mountain potable water reservoir and associated facilities. The proposed Mesa Pump Station site is on a small (approximately 0.05 acres) portion of the City-owned El Corazon parcel adjacent to Mesa Drive. The Morro Heights site is a 3-acre vacant, City-owned parcel previously used for agriculture in northeast Oceanside. The Old Grove site is a 2.14-acre vacant, City-owned lot located west of College Boulevard.

The entire pipeline alignment occurs within existing roadways or on bridges crossings with the exception of two locations: a short segment of the upper pipeline that traverses dirt roads associated with agricultural fields and a short segment of the lower pipeline that traverses an undeveloped lot in the road right-of-way at the west end of Pala Road.

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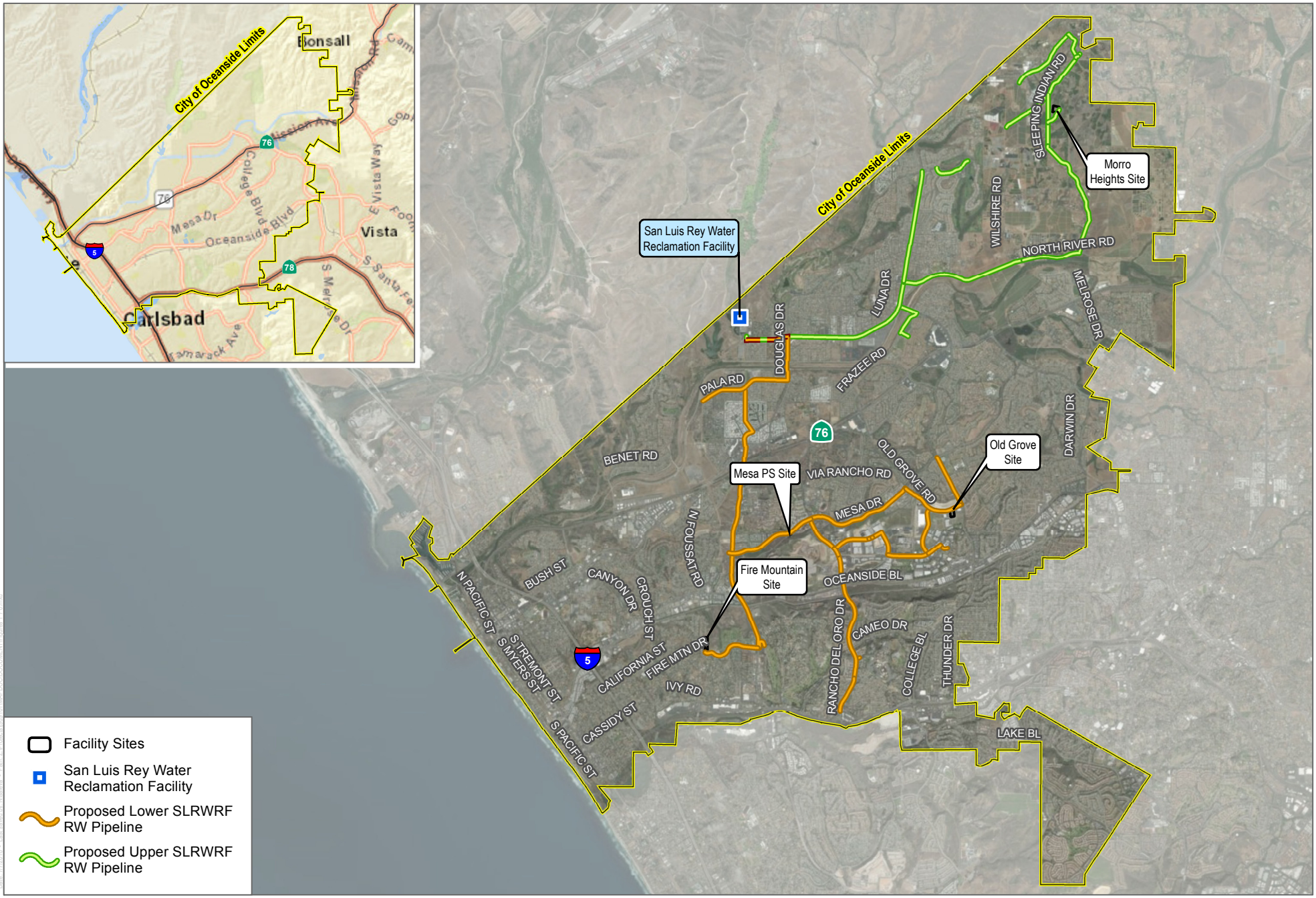

SOURCE: DigitalGlobe 2016; SANGIS 2018

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0 5,000 10,000 Feet

FIGURE 1

Project Location

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4 RESULTS

4.1 Vegetation Communities and Plant Diversity

As described in Section 2.2.1, vegetation community mapping was conducted for vegetation communities that would potentially be subject to avoidance, minimization, or mitigation pursuant to the PEIR. Project areas characterized as developed, disturbed, ornamental landscaping, or agriculture, which comprise a majority of the project area, were not mapped.

Plant species observed during resource mapping of the project area were recorded and are listed in Appendix A. A total of 38 species of native or naturalized plants, 18 native and 20 non-native, was recorded in the project area (see Appendix A). Plant species occupying areas characterized as developed, disturbed, ornamental landscaping, or agriculture were not recorded.

Vegetation communities and land covers in or adjacent to the project area fall into four Oceanside Subarea Plan habitat groups, as shown in Table 2. No vegetation communities in Habitat Group B or D occur in or adjacent to the project area. Mapped vegetation communities in or adjacent to the project area are shown on Figure 2a through 2i.

Table 2
Vegetation Communities and Land Covers in or Adjacent to Project Area

Vegetation Community / Land Cover	Code	Habitat Group
Southern riparian forest	61300	A
Southern willow scrub	63320	A
Riparian-restoration	NA	A
Open water	64100	A
Diegan coastal sage scrub (including disturbed)	32500	C
Diegan coastal sage scrub (Baccharis-dominated)	32530	C
Non-native grassland	42200	E
Developed, Disturbed, Ornamental, Agriculture	12000, 11000, 18000	F

Notes: Vegetation communities follow Holland (1986); (Oberbauer et al. 2008), consistent with the Oceanside Subarea Plan. Habitat Groups are based on the Oceanside Subarea Plan. Habitat Group A = Wetland/Riparian; Habitat Group C = Coastal Sage Scrub; Habitat Group E = Annual Grasslands; Habitat Group F = Other Lands.

4.1.1 Habitat Group A: Wetland/Riparian

Vegetation communities in the wetland/riparian habitat group mapped adjacent to proposed project area include southern riparian forest and southern willow scrub. Additionally, riparian vegetation restoration/plantings and manmade open water areas occur adjacent to the project area. Southern riparian forest is a native vegetation community characterized by dense forest dominated by mature arroyo willow (*Salix lasiolepis*) with Fremont cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*) and occurs in several locations adjacent to the project area, including along

Sleeping Indian Road, North River Road, Mesa Drive, and the bridge crossings of the San Luis Rey River. Southern willow scrub is native riparian vegetation characterized by smaller trees and shrubs of arroyo willow and mulefat (*Baccharis salicifolia*). All vegetation communities in Habitat Group A are considered sensitive (City of Oceanside 2010).

Areas mapped as riparian vegetation communities or open water adjacent to the proposed project area (see Figures 2a – 2i) would be regulated by the ACOE, RWQCB, and/or CDFW. Additionally, several linear drainage features were mapped (see Figure 2a and Figure 2e) that are assumed would be regulated by the ACOE, RWQCB, and/or CDFW.

4.1.2 Habitat Group C: Coastal Sage Scrub

Vegetation communities in the coastal sage scrub habitat group mapped adjacent to the project area include Diegan coastal sage scrub (including disturbed) and Diegan coastal sage scrub (Baccharis-dominated). Coastal sage scrub is a native vegetation community composed of a variety of soft, low, aromatic shrubs, characteristically dominated by drought-deciduous species such as California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and sage (*Salvia mellifera*) with scattered evergreen shrubs, including lemonadeberry (*Rhus integrifolia*) and laurel sumac (*Malosma laurina*). It typically develops on south-facing slopes and in other xeric sites (Holland 1986). The Baccharis-dominated variety contains primarily broom baccharis (*Baccharis sarothroides*). Diegan coastal sage scrub occurs adjacent to the project area throughout the City, including adjacent to El Camino Real, Fire Mountain Road, and the Mesa Pump Station site. The property to the east of Fire Mountain facility site contains coastal sage scrub and approximately 0.08 acres of disturbed coastal sage scrub occurs on the site along the eastern property fenceline. All vegetation communities in Habitat Group C are considered sensitive (City of Oceanside 2010).

4.1.3 Habitat Group E: Annual Grasslands

Vegetation communities in the annual grasslands habitat group include non-native grassland. Non-native grassland are comprised of sparse to dense associations of annual, non-native grasses often on fine-textured or clay soils. In the project area, non-native grassland was dominated by wild oat (*Avena fatua*) or red brome (*Bromus madritensis* ssp. *rubens*) with other occasional species including fennel (*Foeniculum vulgare*), black mustard (*Brassica nigra*), redstem filaree (*Erodium cicutarium*), western ragweed (*Ambrosia psilostachya*), and spreading goldenbush (*Isocoma menziesii* ssp. *menziesii*). Non-native grasslands occur adjacent or in the project area, including adjacent to El Camino Real, at the west end of Pala Road, and at the Mesa Pump Station site.

4.1.4 Habitat Group F: Other Lands

Other lands that occur in or adjacent to the project area include developed areas, disturbed areas, ornamental landscaping, and agriculture. Due to the extent of these land covers in and adjacent to the project area, these types were not specifically mapped. These areas are not considered biological sensitive and would not themselves require avoidance, minimization, or mitigation; however, trees and shrubs are prevalent in this habitat group that could support nesting birds subject to avoidance.

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SOURCE: SANGIS 2017, CDFWS 2018

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0 375 750 Feet

FIUGRE 2-a

Biological Constraints

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SOURCE: SANGIS 2017, CDFWS 2018

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0 295 590 Feet

FIUGRE 2-b

Biological Constraints

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SOURCE: SANGIS 2017, CDFWS 2018

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Biological Constraints

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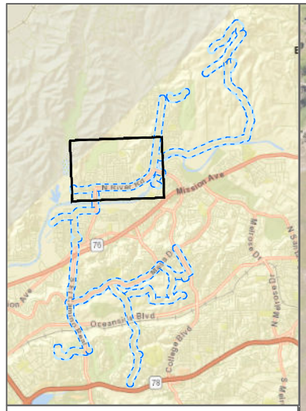

Survey Area

Pipe Alignment

Sensitive Vegetation

- dCSS - Disturbed Diegan Coastal Sage Scrub
- Rip forest - Southern Riparian Forest
- rRip - Riparian Restoration
- Sws - Southern Willow Scrub

CNDDB Occurences

Animals

- Stephens' kangaroo rat
- tricolored blackbird
- yellow warbler
- yellow-breasted chat

SOURCE: SANGIS 2017, CDFWS 2018

DUDEK

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FIUGRE 2-d

Biological Constraints

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SOURCE: SANGIS 2017, CDFWS 2018

DUDEK

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FIUGRE 2-e

Biological Constraints

Biological Resources Technical Report

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SOURCE: SANGIS 2017, CDFWS 2018

DUDEK

0 387.5 775 Feet

FIUGRE 2-f

Biological Constraints

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SOURCE: SANGIS 2017, CDFWS 2018

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FIUGRE 2-g

Biological Constraints

Biological Resources Technical Report

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SOURCE: SANGIS 2017, CDFWS 2018

DUDEK 0 425 850 Feet

FIUGRE 2-h

Biological Constraints

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SOURCE: SANGIS 2017, CDFWS 2018

DUDEK

0 435 870 Feet

FIUGRE 2-i

Biological Constraints

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4.2 Special-Status Plant Species

No plant species listed as rare, threatened, or endangered, listed by USFWS, CDFW or CNPS, or proposed for coverage under the Oceanside Subarea Plan were observed in the project area. Appendix D lists the potential for special-status plant species to occur in the project area. Nine special-status plant species have a moderate to high potential to occur in the project area based on occurrence records and habitat conditions in or immediately adjacent to the project area, including San Diego ambrosia (*Ambrosia pumila*), thread-leaved brodiaea (*Brodiaea filifolia*), Lewis' evening-primrose (*Camissoniopsis lewisii*), Wiggins' cryptantha (*Cryptantha wigginsii*), sand-loving wallflower (*Erysimum ammophilum*), Palmer's grapplinghook (*Harpagonella palmeri*), decumbent goldenbush (*Isocoma menziesii* var. *decumbens*), Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*), and California box-thorn (*Lycium californicum*).

4.3 Wildlife Diversity

A total of 17 wildlife species were observed during field surveys in the project area; a cumulative list of the species is provided in Appendix B. Typical species observed or likely to occur are discussed below.

No amphibian or reptile species were observed during field reconnaissnace. Common reptiles such as side-blotched lizard (*Uta stansburiana*) and gopher snake (*Pituophis melanoleucus*) and common amphibians such as Pacific tree frog (*Hyla regilla*) would be expected to also in or adjacent to the project area.

Common bird species most readily observed included black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), Anna’s hummingbird (*Calypte anna*), song sparrow (*Melospiza melodia*), and mourning dove (*Zenaida macroura*). Most of the species observed or detected are common, urban-adapted, or resident bird species that use a wide variety of native and disturbed habitats.

Evidence of four mammal species was detected during field reconnaissnace: California ground squirrel (*Otospermophilus beecheyi*), domestic cat (*Felis catus*), coyote (*Canis latrans*), and domestic dog (*Canis familiaris*). Other mammal species known to occur in the area include Audubon’s cottontail (*Sylivilagus beecheyi*) and raccoon (*Procyon lotor*). Widespread, urban adapted species such as gray fox (*Urocyon cinereoargenteus*) and Virginia opossum (*Didelphis virginiana*) would also be expected to occasionally occur in or adjacent to the project area.

4.4 Special-Status Wildlife Species

No threatened, endangered, or other specials-status wildlife species were observed in the project area, largely due to the project area being sited primarily in existing developed and disturbed areas of the City. The urbanized nature of the project area and the limited amount and quality of potential wildlife habitat in the project area limits the potential for most special-status species to occur. The project area does occur adjacent to areas known to be occupied by special-status species and habitat with the potential to support special-status species. Appendix D lists special-status wildlife species reported in regional species occurrence (CNDDB, and USFWS) and the Oceanside Subarea Plan and includes an analysis of their potential to occur in the project area. 17 special-status wildlife species have a moderate to high potential to occur in the project area based on occurrence records and habitat conditions in or immediately adjacent to the project area, including orange-throated whiptail (*Aspidoscelis hyperythra*), red diamondback rattlesnake (*Crotalus ruber*), south coast garter snake (*Thamnophis sirtalis* ssp. *infernalis*), Cooper's hawk (*Accipiter cooperii* (nesting)), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis* (nesting)), white-tailed kite (*Elanus leucurus* (nesting)), southwestern willow flycatcher (*Empidonax traillii extimus* (nesting)), yellow-breasted chat (*Icteria virens* (nesting)), coastal California gnatcatcher (*Polioptila californica californica*), yellow warbler (*Setophaga petechia* (nesting)), least Bell's vireo (*Vireo bellii pusillus* (nesting)), pallid bat (*Antrozous pallidus*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), western yellow bat (*Lasiurus xanthinus*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and mule deer (*Odocoileus hemionus*).

Coastal sage scrub has the potential to support coastal California gnatcatcher (federally-listed as threatened) and the species is known to occur in the City based on regional species occurrence datasets and the Oceanside Subarea Plan. During field reconnaissance for this project, coastal California gnatcatcher was detected in habitat adjacent to the project area at the Fire Mountain facility site and the Mesa Pump Station site. Through the planning-level biological review process to site and design the project to avoid sensitive resources, the project would avoid direct impacts to coastal sage scrub and coastal California gnatcatcher consistent with the PEIR; therefore, focused protocol surveys for coastal California gnatcatcher were not necessary and were not conducted. Coastal sage scrub areas also have the potential to support other special-status wildlife species including orange-throated whiptail, red diamond rattlesnake, and southern California rufous-crowned sparrow. See Section 5 for the analysis of impacts to special-status wildlife species.

Southern riparian forest adjacent to the project area has the potential to support federally- and state-listed endangered least Bell’s vireo (*Vireo bellii pusillus*) and southwestern willow flycatcher (*Empidonax traillii extimus*) and these species are known to occur in the City based

on regional species occurrence datasets and the Oceanside Subarea Plan. During field reconnaissance for this project, least Bell's vireo was detected in habitat adjacent Sleeping Indian Road along the project pipeline alignment. Suitable habitat for these riparian species also occurs adjacent to the project area along North River Road, Mesa Drive, and the bridge crossings of the San Luis Rey River. Through the planning-level biological review process to site and design the project to avoid sensitive resources, the project would avoid direct impacts to riparian habitat, least Bells' vireo, and southwestern willow flycatcher consistent with the PEIR; therefore, focused protocol surveys for these species were not necessary and were not conducted. Riparian habitat adjacent to the project area also has the potential to support south coast garter snake, Copper's hawk, western yellow-billed cuckoo, yellow-breasted chat, and yellow warbler. See Section 5 for the analysis of impacts to special-status wildlife species.

Non-native grasslands can provide habitat value for wildlife species; however, the use of this habitat by special-status wildlife species in the City of Oceanside is limited. Burrowing owl (*Athene cunicularia*) is a state species of concern known to use grassland habitats; however, according to the San Diego County Bird Atlas, this species is nearly extirpated from San Diego County and has not been detected in or around Oceanside since 1993 (Unitt 2004). The project area supports suitable habitat for burrowing owl; however, the species is not likely to occur. Stephen's kangaroo rat (*Dipodomys stephensi*) historically occurred in grasslands and sparse shrublands of eastern Oceanside and Bonsall areas; however, according to the San Diego County Mammal Atlas (Tremor et al. 2017), the species is considered extirpated from these portions of the County and is not likely to occur in the project area. Grassland habitat in and adjacent to the project area also has the potential to provide foraging habitat for raptors (e.g., red-tailed hawk [*Buteo jamaicensis*], Cooper's hawk). See Section 5 for the analysis of impacts to special-status wildlife species.

4.5 Regional Conservation Considerations

The City of Oceanside was part of a subregional conservation planning effort lead by the San Diego Association of Governments (SANBAG) referred to as the Multiple Habitat Conservation Program (MHCP), which planned for habitat conservation and economic development for the seven north San Diego County cities of Oceanside, Carlsbad, Encinitas, Solana Beach, Vista, Escondido, and San Marcos. The Oceanside Subarea Plan, developed under the MHCP, was originally envisioned as a habitat conservation plan (HCP) and natural community conservation plan (NCCP) to provide incidental take permits for impacts to Covered Species from Covered Activities; however, the Oceanside Subarea Plan has not been permitted by the USFWS or CDFW or adopted by the City at this time.

The Oceanside Subarea Plan identifies planning zones within the City, including hardline and softline preserves (also referred to as focused planning areas, the wildlife corridor planning zone

(WCPZ), pre-approved mitigation areas (PAMA), off-site mitigation zones (OMZ), and the agricultural exclusion zone (AEZ), and the coastal zone (Oceanside 2010). The project area traverses the WCPZ, OMZ, and the AEZ. The Oceanside Subarea Plan acknowledges that habitat in the City is highly fragmented but that the remaining habitat patches in Oceanside provide for important north-south wildlife movement, especially for bird species, between Carlsbad and Camp Pendleton through the WCPZ. The Oceanside Subarea Plan identifies development standards and mitigation requirements for each of the planning zones.

5 ANTICIPATED PROJECT IMPACTS AND ANALYSIS OF SIGNIFICANCE

This section addresses direct, indirect, and cumulative impacts to biological resources that would result from implementation of the proposed project. Direct impacts are those impacts that would result directly from the construction of the pipeline and the four facility sites in the project area. Indirect impacts primarily result from adverse "edge effects" such as noise, dust, erosion/sedimentation, exotic plant species, and human presence that result in impacts to adjacent resources during construction or during operation of the project. Cumulative impacts refer to incremental individual environmental effects over the long-term implementation of the project when considered together with other impacts from other projects in the area. These impacts taken individually may be minor, but can become collectively significant as they occur over a period of time.

For a majority of the proposed project pipeline alignment, pipeline construction would occur in the existing roadways using standard open trench installation methods and a trench approximately 3-foot-wide by 5- to 8-foot-deep within an approximately 10-foot wide work area (i.e., one lane of the roadway). Trenchless construction approaches, including microtunneling, horizontal drilling, auger boring, and bridge crossings, would also be used at numerous locations to avoid/minimize impacts. For the purpose of the biological resources impact analysis, a 10-foot-wide impact corridor was assumed for all trenched sections of the pipeline alignment. Pit locations for trenchless sections and all staging locations were also considered direct impacts. Except where otherwise noted, the direct impacts would occur over all the four facility sites.

5.1 Explanation of Findings of Significance

Impacts to sensitive habitats and special-status plant and wildlife species must be quantified and analyzed to determine whether such impacts are significant under the California Environmental Quality Act (CEQA). Appendix G of the CEQA Guidelines provide "examples of consequences which may be deemed to be a significant effect on the environment" (Guidelines Section 15064[e]). These effects include substantial effects on rare or endangered species of animals or plants or the habitat of the species. Guidelines Section 15065(a) is also helpful in defining whether a project may have "a significant effect on the environment." Under that section, a proposed project may have a significant effect on the environment if the project has the potential to: (1) substantially degrade the quality of the environment, (2) substantially reduce the habitat of a fish or wildlife species, (3) cause a fish or wildlife population to drop below self-sustaining levels, (4) threaten to eliminate a plant or animal community, (5) reduce the number or restrict the range of a rare or endangered plant or animal, or (6) eliminate important examples of the major period of California history or prehistory.

5.2 Direct Impacts

5.2.1 Vegetation Communities

Direct impacts from the proposed project were estimated by overlaying the proposed facility sites and project pipeline alignment with the mapping of biological resources. As shown Table 3, 0.03 acres of unavoidable impacts to non-native grassland would occur from installation of the proposed facility sites and 0.11 acres of unavoidable impacts to non-native grassland would occur from installation of the proposed pipeline. These impacts to non-native grassland would occur at the Mesa Pump Station site and in a short segment of the upper pipeline at the end of Pala Road. Non-native grasslands are considered sensitive in the Oceanside Subarea Plan, and direct impacts to this vegetation community would be considered significant absent mitigation.

The other facility sites are characterized by developed, disturbed habitat, ornamental landscaping, and fallow agriculture, and impacts to these non-sensitive land covers from implementation of the proposed project would not be significant or require mitigation. Pursuant to the PEIR and consistent with the Oceanside Subarea Plan, compensatory mitigation shall be provided to offset the loss of non-native grassland from the proposed project, as described in PEIR MM 3.4-2 (see Section 6).

Table 3
Direct Impacts to Vegetation Communities in the Project Area

Vegetation Community	Acreage
Proposed Facility Sites	
Non-native Grassland	0.03
Proposed Pipeline	
Non-native Grassland	0.11
Total	**0.14**

Notes: The majority of the proposed project area occurs in other, non-natural land covers not considered sensitive, including developed areas (roadways), disturbed areas, ornamental landscaping, and agricultural lands and impacts to these non-sensitive land covers are not reported.

No direct impacts to any other vegetation communities would occur from the proposed project.

No direct impacts to riparian, wetland, or water features regulated by the ACOE, RWQCB, or CDFW would occur from implementation of the proposed project. Although the proposed project pipeline alignment crosses the San Luis Rey River, Pilgrim Creek, and unnamed drainages, the proposed project would utilize trenchless construction techniques designed to avoid all direct impacts on these resources. As described in Addendum No. 3 to the PEIR, microtunnelling or horizontal directional drilling (HDD) will be utilized to cross the San Luis Rey River, bridge crossings will be used for Pilgrim Creek and the San Luis Rey River, and

auger boring will be used for the unnamed drainages. Although no direct impacts to jurisdictional areas would occur from the proposed project, "frac-out" releases or other emergency situations have been known to occur during construction that have the potential to impact jurisdictional riparian, wetland, or water features absent mitigation. Pursuant to the PEIR, notification to the regulatory agencies shall be required prior to ground disturbing activities to mitigate for such situations, as described in PEIR MM 3.4-3 (see Section 6).

5.2.2 Special-Status Plant Species

No special-status plant species were observed in the project area and no occurrence records for special-status plant species occur in the project area. The majority of the proposed facilities and pipeline occur in developed, disturbed habitat, ornamental landscaping, and fallow agriculture areas that have very little potential to support special-status plant species; therefore, direct impacts to special-status plant species would not be anticipated in these areas and no mitigation pursuant to this analysis or the PEIR would be required.

Direct impacts to non-native grassland would occur from construction of the proposed project at the Mesa Pump Station facility site and the western pipeline segment at west end of Pala Road. Although no special-status plant species were observed during field reconnaissance and no occurrence records occur at these locations, the habitat is suitable to support special-status plant species, notably two federally-listed special-status plant species: thread-leaved brodiaea and San Diego ambrosia. Direct impact to these species would be significant if not avoided or otherwise mitigated. Pursuant to the PEIR and to ensure avoidance of special-status plant species at the Mesa Pump Station facility site and the western pipeline segment at west end of Pala Road, properly timed pre-construction surveys for thread-leaved brodiaea and San Diego ambrosia shall be conducted at these locations. If these species are identified during pre-construction surveys at these locations, avoidance measures would be implemented consistent with the PEIR and Oceanside Subarea Plan, as described in PEIR MM 3.4-1a (see Section 6).

5.2.3 Special-Status Wildlife Species

No special-status wildlife species were observed in the project area and no occurrence records for special-status wildlife species occur in the immediate project area. The majority of the proposed facilities and pipeline occur in developed, disturbed habitat, ornamental landscaping, and fallow agriculture areas that have very little potential to support special-status wildlife species; therefore, direct impacts to special-status wildlife species would not be anticipated in these areas and no mitigation pursuant to this analysis or the PEIR would be required.

Direct impacts to non-native grassland would occur from construction of the proposed project at the Mesa Pump Station facility site and a short segment of the upper pipeline at the west end of Pala Road. No special-status wildlife species were observed during field reconnaissance and no occurrence records occur at these locations. Non-native grassland provides potentially suitable habitat for burrowing owl (a state species of concern); however, this species has been in decline in San Diego County for decades and has not been detected in Oceanside or the vicinity in 25 years. Although this species is not expected to occur in the project area, impacts would be significant if not avoided or otherwise mitigated.

Pursuant to the PEIR and to ensure avoidance of special-status wildlife species at the Mesa Pump Station facility site and the western pipeline segment at west end of Pala Road, pre-construction surveys for burrowing owl will be conducted at these locations. If burrowing owl or other special-status wildlife species are identified during pre-construction surveys at these locations, avoidance or compensatory mitigation would be implemented consistent with the PEIR and Oceanside Subarea Plan, as described in PEIR MM 3.4-2b (see Section 6).

Trees, shrubs, and other areas of the project area have the potential to support nesting birds protected by the Migratory Bird Treaty Act (MBTA) and/or the California Fish and Game Code. Direct impacts to nesting birds would be significant absent mitigation. Pursuant to the PEIR and to avoid nesting birds during construction of the proposed project, pre-construction nesting bird surveys and avoidance measures shall be implemented, as described in PEIR MM 3.4-4 (see Section 6).

5.2.4 Regional Conservation Considerations

The majority of the proposed facilities and pipeline occur in developed, disturbed habitat, ornamental landscaping, and fallow agriculture areas that would not impact regional conservation considerations such as wildlife movement and regional habitat connectivity as addressed in the Oceanside Subarea Plan. Wildlife may temporarily avoid pipeline segments and facilities during the active construction phase; however, this effect would be considered short-term and less than significant. The Morro Heights, Fire Mountain, and Old Grove facility sites are all located on properties with previous disturbance in developed areas that do not appreciably contribute to wildlife movement or regional connectivity. The Morro Heights site is located in the Oceanside Subarea Plan AEZ planning zone on an old agricultural property surrounded by residential development and agriculture. The Fire Mountain site is located in the Oceanside Subarea Plan OMZ planning zone on a property with an existing water reservoir adjacent to residential development and open space. The Old Grove facility site is located in the Oceanside Subarea Plan OMZ planning zone on a graded pad surrounded by commercial/industrial development.

The proposed Mesa Pump Station site is located at the edge of the Oceanside Subarea Plan WCPZ that is also designated as a PAMA. This site is located within an Oceanside Subarea Plan hardline preserve that follows the north side of the El Corazon property and supports coastal sage scrub and riparian vegetation along Garrison Creek that parallels Mesa Drive. Construction of the pump station will impact 0.10 acres of the hardline preserve, including approximately 0.07 acres of dirt road and 0.03 acres of non-native grassland. This impact is considered relatively minor considering its size and that the site is situated adjacent to Mesa Road in an area characterized by dirt road and non-native grassland. The construction of this facility would not appreciably affect wildlife movement or the ability of the City to implement the Oceanside Subarea Plan; however, direct impacts to the City's hardline preserve would be considered significant absent mitigation. According to the Oceanside Subarea Plan, the El Corazon hardline preserve development standards call for a minimum of 120 acres of contiguous biological open space to be conserved on this property, including 45 acres on the west side and 75 acres along Garrison Creek. In order for the impacts from this facility site to be reduced below a level of significance, the 0.10 acres of hardline preserve should be replaced by habitat conservation or restoration elsewhere in the El Corazon hardline preserve such that there is a no-net-loss of hardline preserve resulting from this project. Additionally as described above in Section 5.2.1, the Oceanside Subarea Plan specifies that the mitigation for the impacts to the non-native grassland shall be at a 0.5:1 ratio and must be implemented in the WCPZ or PAMA planning zones (may be combined with hardline preserve mitigation). Implementation of the PEIR MM 3.4-2 (see Section 6) would offset the loss of hardline preserve from the proposed project below a level of significance.

Proposed pipeline impacts to non-native grassland at the west end of Pala Road are located in the Oceanside Subarea Plan OMZ planning zone. This short pipeline segment occurs in the undeveloped Pala Road right-of-way adjacent to residential development in the south and east and the San Luis Rey River corridor in the west. Installation of this proposed pipeline segment would not appreciably impact wildlife movement or City's ability to implement the Oceanside Subarea Plan and would be considered less than significant. Mitigation for the impacts to the non-native grassland from the construction of the pipeline segment would need to comply with the Oceanside Subarea Plan guidelines for impacts in this planning zone, which specify that mitigation shall be at a 0.5:1 ratio and must be implemented in the WCPZ or PAMA planning zones as described in Section 6.

5.3 Indirect Impacts

5.3.1 Vegetation Communities

Indirect impacts to vegetation during construction may include dust, which could disrupt plant vitality in the short term, construction-related soil erosion and runoff, and invasive plant species. Implementation of construction Best Management Practices (BMPs) including dust control, erosion control, and water quality protection would be required for the project to obtain a grading permit. Implementation of these dust, erosion control, and water quality protection measures during construction would reduce the potential short-term indirect impacts on adjacent vegetation communities below a level of significance.

Long-term indirect effects to adjacent vegetation communities may occur during operation of the pipeline following construction, including potential increased water runoff and potential spreading of invasive plant species. Minor long-term indirect impacts may occur to vegetation communities adjacent to the facility site from increased water runoff; however, operational BMPs would also be in place, as required by the City to protect water quality, that would reduce these effects below a level of significance. All work areas and temporary disturbance areas will be seeded and revegetated with native plant species to avoid and minimize the spread of invasive non-native plant species into adjacent areas to reduce this potential impact below a level of significance.

5.3.2 Special-Status Plant Species

The indirect impacts to vegetation communities discussed above could also affect special-status plant species that may occur within the project site. Implementation of construction BMPS would minimize construction impacts to special-status plant species. As noted above, the majority of the proposed facilities and pipeline are by developed, disturbed habitat, ornamental landscaping, and fallow agriculture land cover that have little or no potential to support special-status plant species, and the potential for indirect impacts to special-status plant species in these areas would be less than significant and no mitigation pursuant to this analysis or the PEIR would be required. No long-term indirect effects to adjacent specials-status plant species would be expected during operation of the pipeline following construction, and indirect effects to potential adjacent special-status plant species from facility operation would be considered less than significant.

5.3.3 Special-Status Wildlife Species

Indirect effects to special-status wildlife species during construction may include noise, dust, erosion/sedimentation, and increased human presence. As noted above under indirect effects to vegetation, the potential indirect impacts from construction dust and erosion/sedimentation would be avoided and minimized through construction BMPs, which would reduce these

potential effects on special-status wildlife species below a level of significance. Although increased human presence during construction may result in avoidance of behavioral modification by wildlife in the area, this effect would be short-term and less than significant.

Noise generated during construction has the potential to indirectly impact adjacent special-status wildlife species through disrupting their normal activities, particularly breeding and nesting behavior of special-status bird species. Special-status bird species, including federal- and state-listed species and species protected under protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503-3513 and 3800-3801, occur in habitats adjacent to the project area and have the potential to be indirectly impacted by construction noise. Adjacent habitat areas include riparian habitat and coastal sage scrub, which have the potential to support special-status riparian bird species (e.g., least Bell's vireo, southwestern willow flycatcher) and special-status scrub bird species (e.g., coastal California gnatcatcher), and occur adjacent to the pipeline corridor and facility sites as shown on Figures 2a through 2i. Construction noise levels above 60 dB(A) Leq in adjacent special-status wildlife species habitat during the nesting season would be significant if not mitigated. Pursuant to the PEIR and to ensure avoidance of indirect noise impacts to special-status wildlife species during construction, avoidance and minimization measures, including seasonal restrictions, pre-construction surveys, buffer and/or noise attenuation, shall be implemented consistent with the PEIR, as described in PEIR MM 3.4-2 (see Section 6).

Indirect effects to special-status wildlife species during pipeline and facility operation may include pump station noise and increased human presence. The project areas are mostly located in an urban setting throughout the City and the nominal increase in human presence in the project area during operation would have a less than significant indirect impact on potential adjacent special-status wildlife species.

The Fire Mountain facility and the Mesa pump station facility would be located adjacent to coastal sage scrub and riparian habitats with the potential to support special-status scrub bird species and special-status riparian bird species. Operational noise levels above 60 dB(A) Leq in adjacent special-status wildlife species habitat during the nesting season would be significant. Based on the noise analysis conducted for the proposed project, the operational noise level for both facilities (Fire Mountain and Mesa) at 20 feet would be 50 dB(A) Leq. Coastal sage scrub habitat and riparian habitat are 20 feet or more away from these facilities; therefore, the potential indirect impact of elevated operational noise on adjacent special-status wildlife species would be less than significant and would not require mitigation.

5.4 Cumulative Impacts

The proposed project would involve excavation and other ground disturbance associated with construction of the facility sites and pipeline. Although the proposed project will occur primarily in developed areas along roadways and in other previously disturbed areas minimizing impacts to biological resources, ground-disturbing activities have the potential to contribute to habitat loss and fragmentation, including direct or indirect impacts to vegetation communities and special-status species. Further, noise from equipment necessary during construction and operation of the projects could cumulatively affect species, including nesting birds. Avoidance, minimization, and mitigation measures would be implemented for the proposed project to reduce its impacts to biological resources to less than significant levels. With implementation of these measures, the proposed project's contribution to cumulative biological resources impacts would be less than significant.

6 AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

The proposed project has been planned and designed to avoid and minimize resource impacts at several levels, including during the development of the programmatic project and PEIR, during the planning-level biological review process described in Section 2.2, and through this analysis developed in support of Addendum No. 3 to the PEIR. As such impacts to biological resources have been minimized to the maximum extent feasible through iterative pipeline and facility siting and design. The following measures shall be implemented to avoid and minimize impacts to biological resources and to mitigate those impacts that are unavoidable.

The programmatic project analyzed in the PEIR was designed to avoid and minimize the impacts to the environment, including biological resources, to the maximum extent practicable. Additionally as described above in the Section 2 Methods, an Environmental Compliance and Mitigation Technical Memorandum (Dudek and NV5 2017) was developed early in the planning process to select sites and design the pipeline alignment to avoid and minimize environmental impacts. Therefore, based on that process, the selected sites and pipeline alignment of the proposed project have avoided and minimized impacts to biological resources to the maximum extent. The facility sites selected are largely in non-biologically sensitive areas and the pipeline alignment is largely in developed and disturbed areas (primarily existing roadways), resulting in very little direct impact to biological resources, as analyzed above in Section 5.

In addition to impact avoidance and minimization through siting and design, implementation of the following project design features, as described as part of the project description in Addendum No. 3 to the PEIR, would further avoid and minimize impacts to biological resources:

- Prior to the start of construction, sensitive vegetation communities adjacent to work areas, as shown on Figure 2a-2i, will demarcated in the field by a qualified biologist approved by the City of Oceanside. Where necessary to prevent construction activities from entering sensitive vegetation areas, environmental fencing will be installed around sensitive areas for avoidance.
- Prior to the start of construction, a qualified biologist will prepare and train construction staff, including subcontractors, regarding the worker environmental awareness program (WEAP). The WEAP will including information on procedures for avoiding adjacent biological resources.
- Industry-standard construction and storm water best management practices will be implemented during construction and during operations of the proposed project to avoid and minimize the potential effects of erosion and sedimentation on adjacent biological resources.

- A qualified biologist approved by the City of Oceanside will monitor ground disturbance-related construction activities adjacent to sensitive vegetation communities. Qualified biologist will submit monthly monitoring reports to the City to document measure implementation and resource avoidance.

Despite the avoidance and minimization measures summarized above, the proposed project has the potential to result impacts to biological resources absent implementation of certain mitigation measures from the PEIR. Implementation of the following mitigation measures from the PEIR would be necessary to mitigate the effects of this project below a level of significance.

PEIR MM 3.4-1a. Surveys and Mitigation for Sensitive Plant Species. A pre-construction special-status plant species survey shall be conducted at the appropriate time of year to detect San Diego ambrosia and thread-leaved brodiaea in the grassland habitat at Mesa Pump Station site and west end of Pala Road locations, pursuant to PEIR MM 3.4-1a. If surveys do not detect these plant species in the project area where construction activities would occur, no further action shall be necessary. If San Diego ambrosia, thread-leaved brodiaea, or other special-status plant species are detected at these locations that cannot be avoided by the proposed project, a MMP shall be prepared and approved by the City of Oceanside prior to construction that describes the details on the avoidance and/or compensation measures to be implemented to prevent impacts to these species, including trenchless construction, species translocation, or other methods appropriate to the species consistent with PEIR 3.4-1a and the Oceanside Subarea Plan narrow endemic policy.

PEIR MM 3.4-1b. Surveys and Mitigation for Sensitive Wildlife Species. The following measures shall be implemented to avoid and, if necessary, mitigate the potential effects of the proposed project on special-status wildlife species, pursuant to PEIR MM 3.4-1b:

- Pre-construction burrowing owl surveys shall be conducted by a qualified biologist at Mesa Pump Station facility site and west end of Pala Road pipeline segment where direct impacts to non-native grassland would occur, pursuant to the PEIR MM 3.4-1b. If surveys do not detect burrowing owl in the project area where construction activities would occur, no further action shall be necessary. If occupied burrowing owl burrows are detected in the project area that cannot be avoided, a burrowing owl exclusion and mitigation plan shall be prepared and approved by the City of Oceanside and the California Department of Fish and Wildlife (CDFW) that describes the exclusion and mitigation approach developed consistent with PEIR MM 3.4-1b, the Oceanside Subarea Plan, and the latest CDFW burrowing owl guidance.

- Construction activities resulting in noise levels above 60 dB(A) Leq in adjacent coastal sage scrub habitat or riparian habitat shown on Figures 2a-2i shall be avoided during the nesting season for coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher (combined nesting season: February 15 – September 15). If elevated construction noise levels above 60 dB(A) Leq cannot be avoided in adjacent habitat areas during the nesting season for these species, the following measures shall be implemented consistent with PEIR MM 3.4-2b:
    - Focused surveys for coastal California gnatcatcher, least Bell's vireo, and/or southwestern willow flycatcher shall be conducted by a qualified biologist in adjacent habitat areas subject to elevated construction noise pursuant to USFWS protocol methods and PEIR 3.4-2b. If protocol surveys determine that these species are not nesting in adjacent habitat with the potential to be affected by construction noise, no further action shall be necessary.
    - If protocol surveys for coastal California gnatcatcher, least Bell's vireo, and/or southwestern willow flycatcher identify nesting birds in adjacent habitat with the potential to be affected by construction noise, noise attenuation measures shall be implemented to reduce the noise level in the occupied habitat below 60 dB(A) Leq or approval from the USFWS shall be obtained to exceed this standard. Pursuant to the PEIR, noise attenuation measures shall include construction set-back buffers, equipment noise mufflers, sound walls, or other approaches developed by the qualified biologist and noise monitor and approved by the City of Oceanside, consistent with PEIR MM 3.4-1b.

PEIR MM 3.4-2. Native Habitat Compensation. Prior to the issuance of grading permits for the proposed project, a Mitigation and Monitoring Plan (MMP) shall be prepared and approved by the City of Oceanside, pursuant to PEIR MM 3.4-2, that describes the details on the compensatory habitat mitigation that shall be implemented to offset the impacts to sensitive vegetation communities. At a minimum, the MMP shall include the approach, methods, locations, and specifications to mitigate for any sensitive vegetation community temporarily impacted during construction and any permanent direct impact. Permanent impacts to sensitive vegetation communities shall be compensated according to the mitigation ratios specified in PEIR MM 3.4-2 and Oceanside Subarea Plan. Additionally as required in PEIR MM 3.4-2, temporary impacts to sensitive vegetation communities shall be restored to pre-project conditions at a 1:1 ratio.

Construction of proposed project facilities will result in a total of 0.03 acres of permanent impact to non-native grassland, which based on PEIR MM 3.4-2 and the Oceanside Subarea Plan would require compensation at a 0.5:1 mitigation ratio. This impact would occur at the Mesa Pump

Station site which is located in an area designated by the Oceanside Subarea Plan as a hardline preserve; a total of 0.10 acres (0.03 acres of non-native grassland; 0.07 acres of dirt road) of direct impact to Oceanside Subarea Plan hardline preserve would occur at this location. In order to offset the effects of the proposed project consistent with the PEIR and Oceanside Subarea Plan, a minimum of 0.10 acres of habitat conservation or habitat restoration shall be implemented in the Oceanside Subarea Plan El Corazon hardline preserve area to offset the loss of non-native grassland and hardline preserve from construction of the proposed project facilities. In order to compensate for the 0.11 acres of temporary impact to non-native grassland from the construction of project pipelines, a minimum of 0.11 acres of non-native grassland will be restored in-place consistent with PEIR MM 3.4-2 and the Oceanside Subarea Plan. The MMP prepared pursuant to this mitigation measure shall address all compensatory mitigation activities used to offset the 0.11 acres of temporary impact and 0.10 acres of permanent impacts resulting from the proposed project.

PEIR MM 3.4-3. Complete Jurisdictional Delineation and Mitigation as Applicable. Prior to any ground disturbing activities, the USACE, RWQCB, and CDFW shall be notified of the proposed jack and boring or HDD activities beneath jurisdictional features. If required by CDFW, a Streambed Alteration Agreement under Section 1602 of the California Fish and Game Code would be obtained. A plan to deal with potential frac-out release or other emergency shall be prepared by the contractor (or project engineer) for submittal to USACE, RWQCB, and CDFW, if requested, prior to the activities outlining the project as well as the provisions in place to avoid/contain pollutants in case of an accident (e.g., should frac-out release occur).

PEIR MM 3.4-4. Avoid Migratory Bird Nesting Season or Complete Surveys Before Construction Activities. If feasible, construction within or adjacent to vegetation suitable for migratory birds shall occur outside the nesting season (i.e., construction shall occur between September 1 through January 14) to avoid potential direct and indirect impacts to nesting birds. If vegetation removal is required during the nesting season, a qualified biologist shall survey all suitable habitats for the presence of nesting birds before commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors) around the nest shall be delineated, flagged, and avoided until the nesting cycle is complete, or as determined appropriate by the biologist. Biological monitoring shall also occur until the nesting cycle is complete.

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APPENDIX A

Plant Species Observed on Site

APPENDIX A
List of Plant Species Observed On Site

EUDICOTS

VASCULAR SPECIES

AIZOACEAE—FIG-MARIGOLD FAMILY

* *Carpobrotus edulis*—ice plant

ANACARDIACEAE—SUMAC OR CASHEW FAMILY

Malosma laurina—laurel sumac

Rhus integrifolia—lemonade berry

* *Schinus molle*—Peruvian peppertree

APIACEAE—CARROT FAMILY

* *Foeniculum vulgare*—fennel

ASTERACEAE—SUNFLOWER FAMILY

Ambrosia psilostachya—western ragweed

Artemisia californica—California sagebrush

Baccharis pilularis—coyote brush

* *Centaurea melitensis*—Maltese star-thistle

Deinandra fasciculata—clustered tarweed

Heterotheca grandiflora—telegraphweed

* *Pseudognaphalium luteoalbum*—Jersey cudweed

* *Sonchus oleraceus*—common sowthistle

BRASSICACEAE—MUSTARD FAMILY

* *Brassica nigra*—black mustard

* *Hirschfeldia incana*—shortpod mustard

CHENOPODIACEAE—GOOSEFOOT FAMILY

Atriplex lentiformis—quailbush

* *Salsola tragus*—prickly Russian thistle

EUPHORBIACEAE—SPURGE FAMILY

Croton setiger—dove weed

* *Ricinus communis*—castorbean

FABACEAE—LEGUME FAMILY

Acmispon glaber—deer weed

* *Cytisus scoparius*—broom

FAGACEAE—OAK FAMILY

Quercus agrifolia—coast live oak

LAMIACEAE—MINT FAMILY

* *Marrubium vulgare*—horehound

PLATANACEAE—PLANE TREE, SYCAMORE FAMILY

Platanus racemosa—California sycamores

POLYGONACEAE—BUCKWHEAT FAMILY

Persicaria lapathifolia—smartweed

ROSACEAE—ROSE FAMILY

Heteromeles arbutifolia—toyon

SALICACEAE—WILLOW FAMILY

Salix lasiolepis—arroyo willow

SCROPHULARIACEAE—FIGWORT FAMILY

* *Myoporum laetum*—myoporum

SOLANACEAE—NIGHTSHADE FAMILY

Datura wrightii—sacred thorn-apple

* *Nicotiana glauca*—tree tobacco

* *Solanum nigrum*—black nightshade

MONOCOTS

VASCULAR SPECIES

ARECACEAE—PALM FAMILY

* *Washingtonia robusta*—Washington fan palm

CYPERACEAE—SEDGE FAMILY

Cyperus eragrostis—tall flatsedge

POACEAE—GRASS FAMILY

* *Avena fatua*—wild oat

* *Bromus madritensis* ssp. *madritensis*—compact brome

* *Cynodon dactylon*—Bermudagrass

Leptochloa fusca ssp. *uninervia*—Mexican sprangletop

* *Polypogon monspeliensis*—annual rabbitsfoot grass

* signifies introduced (non-native) species

APPENDIX B

Wildlife Species Observed on Site

APPENDIX B
Wildlife Species Observed On Site

BIRD

FINCHES

FRINGILLIDAE—FRINGILLINE AND CARDUELINE FINCHES AND ALLIES

Haemorhous mexicanus—house finch

FLYCATCHERS

TYRANNIDAE—TYRANT FLYCATCHERS

Sayornis nigricans—black phoebe

Sayornis saya—Say's phoebe

HUMMINGBIRDS

TROCHILIDAE—HUMMINGBIRDS

Calypte anna—Anna's hummingbird

JAYS, MAGPIES AND CROWS

CORVIDAE—CROWS AND JAYS

Aphelocoma californica—California scrub-jay

Corvus brachyrhynchos—American crow

NEW WORLD QUAIL

ODONTOPHORIDAE—NEW WORLD QUAIL

Callipepla californica—California quail

OLD WORLD WARBLERS AND GNATCATCHERS

SYLVIIDAE—SYLVIID WARBLERS

Polioptila californica californica—coastal California gnatcatcher

PIGEONS AND DOVES

COLUMBIDAE—PIGEONS AND DOVES

Zenaida macroura—mourning dove

VIREOS

VIREONIDAE—VIREOS

Vireo bellii pusillus—least Bell's vireo

NEW WORLD SPARROWS

PASSERELLIDAE—NEW WORLD SPARROWS

Melospiza melodia—song sparrow
Melozone crissalis—California towhee
Zonotrichia leucophrys—white-crowned sparrow

MAMMAL

CANIDS

CANIDAE—WOLVES AND FOXES

Canis latrans—coyote

DOMESTIC

CANIDAE—WOLVES AND FOXES

* *Canis lupus familiaris*—domestic dog

FELIDAE—CATS

* *Felis catus*—domestic cat

SQUIRRELS

SCIURIDAE—SQUIRRELS

Spermophilus (Otospermophilus) beecheyi—California ground squirrel

* signifies introduced (non-native) species

APPENDIX C

Special-Status Plant Species Potentially Occurring in the Project Area

APPENDIX C
Special-Status Plant Species Potentially Occurring within the Biological Study Area

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Abronia maritima	red sand-verbena	None/None/4.2	None	Coastal dunes/perennial herb/Feb–Nov/0–330	Not expected to occur. No suitable vegetation present.
Abronia villosa var. *aurita*	chaparral sand-verbena	None/None/1B.1	None	Chaparral, Coastal scrub, Desert dunes; sandy/annual herb/(Jan)Mar–Sep/245–5250	Low potential to occur. Nearest locations are in the Santa Margarita floodplain (CDFW 2018).
Acanthomintha ilicifolia	San Diego thorn-mint	FT/SE/1B.1	Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay, openings/annual herb/Apr–June/30–3150	Low potential to occur. Most occurrences are south or east of Oceanside (SDNHM 2018).
Acmispon prostratus	Nuttall's acmispon	None/None/1B.1	Covered	Coastal dunes, Coastal scrub (sandy)/annual herb/Mar–June(July)/0–35	Low potential to occur. This species occurs along the immediate coastline (CDFW 2018).
Adolphia californica	California adolphia	None/None/2B.1	None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay/perennial deciduous shrub/Dec–May/30–2430	Low potential to occur. All known occurrences are south of the project area (CDFW 2018).
Ambrosia pumila	San Diego ambrosia	FE/None/1B.1	Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; sandy loam or clay, often in disturbed areas, sometimes alkaline/perennial rhizomatous herb/Apr–Oct/65–1360	High potential to occur. Records from 2015 are within 0.5-mile of the L1B alignment (CDFW 2018).
Arctostaphylos glandulosa ssp. *crassifolia*	Del Mar manzanita	FE/None/1B.1	None	Chaparral (maritime, sandy)/perennial evergreen shrub/Dec–June/0–1200	Not expected to occur. No suitable vegetation present.
Arctostaphylos rainbowensis	Rainbow manzanita	None/None/1B.1	None	Chaparral/perennial evergreen shrub/Dec–Mar/670–2200	Not expected to occur. No suitable vegetation present.
Artemisia palmeri	San Diego sagewort	None/None/4.2	None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; sandy, mesic/perennial deciduous shrub/(Feb)May–Sep/45–3000	Low potential to occur. All known occurrences are south of the project area (SDNHM 2018).
Astragalus tener var. *titi*	coastal dunes milk-vetch	FE/SE/1B.1	None	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie (mesic); often vernally mesic areas/annual herb/Mar–May/0–165	Not expected to occur. No suitable vegetation present.

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Atriplex coulteri	Coulter's saltbush	None/None/1B.2	None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; alkaline or clay/perennial herb/Mar–Oct/5–1510	Low potential to occur. The nearest location is along the Santa Margarita River (CDFW 2018).
Atriplex pacifica	South Coast saltscale	None/None/1B.2	None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0–460	Low potential to occur. The only location in Oceanside is a historical occurrence from 1881 (CDFW 2018).
Bloomeria clevelandii	San Diego goldenstar	None/None/1B.1	None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/perennial bulbiferous herb/Apr–May/160–1525	Low potential to occur. All known occurrences are south of the project area (CDFW 2018; SDNHM 2018).
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1	Covered	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; often clay/perennial bulbiferous herb/Mar–June/80–3675	High potential to occur. There is an occurrence directly adjacent to alignment L1B.
Brodiaea orcuttii	Orcutt's brodiaea	None/None/1B.1	None	Closed-cone coniferous forest, Chaparral, Cismontane woodland, Meadows and seeps, Valley and foothill grassland, Vernal pools; mesic, clay/perennial bulbiferous herb/May–July/95–5550	Low potential to occur. No suitable mesic vegetation present, nearest location is San Marcos.
Camissoniopsis lewisii	Lewis' evening-primrose	None/None/3	None	Coastal bluff scrub, Cismontane woodland, Coastal dunes, Coastal scrub, Valley and foothill grassland; sandy or clay/annual herb/Mar–May(June)/0–985	Moderate potential to occur. There is suitable coastal scrub and grassland habitat in the project area and records in the vicinity.
Ceanothus verrucosus	wart-stemmed ceanothus	None/None/2B.2	None	Chaparral/perennial evergreen shrub/Dec–May/0–1245	Not expected to occur. No suitable vegetation present.
Centromadia parryi ssp. *australis*	southern tarplant	None/None/1B.1	None	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1575	Low potential to occur. Nearest record is a historical record from Escondido.
Centromadia pungens ssp. *laevis*	smooth tarplant	None/None/1B.1	None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; alkaline/annual herb/Apr–Sep/0–2100	Low potential to occur. The only records in Oceanside are historic from the 1890s (CDFW 2018).

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Chaenactis glabriuscula var. *orcuttiana*	Orcutt's pincushion	None/None/1B.1	None	Coastal bluff scrub (sandy), Coastal dunes/annual herb/Jan–Aug/0–330	Not expected to occur. No suitable vegetation present.
Chamaebatia australis	southern mountain misery	None/None/4.2	None	Chaparral (gabbroic or metavolcanic)/perennial evergreen shrub/Nov–May/980–3345	Not expected to occur. No suitable vegetation present.
Cistanthe maritima	seaside cistanthe	None/None/4.2	None	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; sandy/annual herb/(Feb)Mar–June(Aug)/15–985	Low potential to occur. No records in the City of Oceanside (SDNHM 2018).
Comarostaphylis diversifolia ssp. *diversifolia*	summer holly	None/None/1B.2	None	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–June/95–2590	Not expected to occur. No suitable vegetation present.
Convolvulus simulans	small-flowered morning-glory	None/None/4.2	None	Chaparral (openings), Coastal scrub, Valley and foothill grassland; clay, serpentinite seeps/annual herb/Mar–July/95–2430	Low potential to occur. No records in the City of Oceanside (SDNHM 2018).
Corethrogyne filaginifolia var. *linifolia*	Del Mar Mesa sand aster	None/None/1B.1	None	Coastal bluff scrub, Chaparral (maritime, openings), Coastal scrub; sandy/perennial herb/May,July,Aug,Sep/45–490	Low potential to occur. All records south of the project area (CDFW 2018).
Cryptantha wigginsii	Wiggins' cryptantha	None/None/1B.2	None	Coastal scrub; often clay/annual herb/Feb–June/65–900	Moderate potential to occur. There is an occurrence about 0.6 miles south of alignment L4B that was observed in 2013 (CDFW 2018).
Deinandra paniculata	paniculate tarplant	None/None/4.2	None	Coastal scrub, Valley and foothill grassland, Vernal pools; usually vernally mesic, sometimes sandy/annual herb/(Mar)Apr–Nov/80–3085	Low potential to occur. The nearest record is east of Guajome Regional Park (SDNHM 2018).
Dichondra occidentalis	western dichondra	None/None/4.2	None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial rhizomatous herb/(Jan)Mar–July/160–1640	Low potential to occur. No records in Oceanside (SDNHM 2018).

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	None/None/1B.1	Covered	Coastal bluff scrub, Chaparral, Coastal scrub, Valley and foothill grassland; rocky, often clay or serpentinite/perennial herb/Apr–June/15–1475	Low potential to occur. Several occurrences within 5 miles of the project area (CDFW 2018) but no suitable substrate present.
Dudleya multicaulis	many-stemmed dudleya	None/None/1B.2	None	Chaparral, Coastal scrub, Valley and foothill grassland; often clay/perennial herb/Apr–July/45–2590	Low potential to occur. All occurrences are north of Camp Pendleton (SDNHM 2018).
Dudleya variegata	variegated dudleya	None/None/1B.2	None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/perennial herb/Apr–June/5–1905	Low potential to occur. Records are all in southern San Diego County (CDFW 2018).
Dudleya viscida	sticky dudleya	None/None/1B.2	Covered	Coastal bluff scrub, Chaparral, Cismontane woodland, Coastal scrub; rocky/perennial herb/May–June/30–1805	Low potential to occur. Several records west of the project area however no suitable rocky substrate (CDFW 2018).
Eryngium aristulatum var. *parishii*	San Diego button-celery	FE/SE/1B.1	None	Coastal scrub, Valley and foothill grassland, Vernal pools; mesic/annual / perennial herb/Apr–June/65–2035	Low potential to occur. No vernal pools in the project area.
Eryngium pendletonense	Pendleton button-celery	None/None/1B.1	None	Coastal bluff scrub, Valley and foothill grassland, Vernal pools; clay, vernally mesic/perennial herb/Apr–June(July)/45–360	Low potential to occur. No vernal pools in the project area.
Erysimum ammophilum	sand-loving wallflower	None/None/1B.2	None	Chaparral (maritime), Coastal dunes, Coastal scrub; sandy, openings/perennial herb/Feb–June/0–195	Moderate potential to occur. Several records from just outside the City limits in Camp Pendleton (CDFW 2018).
Euphorbia misera	cliff spurge	None/None/2B.2	None	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; rocky/perennial shrub/Dec–Aug(Oct)/30–1640	Low potential to occur. No recent records in the area (SDNHM 2018).
Ferocactus viridescens	San Diego barrel cactus	None/None/2B.1	Covered	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/perennial stem succulent/May–June/5–1475	Low potential to occur. This species is generally not found north of Solana Beach (SDNHM 2018).

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Harpagonella palmeri	Palmer's grapplinghook	None/None/4.2	None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay; open grassy areas within shrubland/annual herb/Mar–May/65–3135	Moderate potential to occur. There is suitable grassland habitat in the project area and records in the vicinity (SDNHM 2018).
Hazardia orcuttii	Orcutt's hazardia	None/ST/1B.1	Covered	Chaparral (maritime), Coastal scrub; often clay/perennial evergreen shrub/Aug–Oct/260–280	Low potential to occur. Nearest record is a transplant outside of the native range for the species (CDFW 2018).
Holocarpha virgata ssp. *elongata*	graceful tarplant	None/None/4.2	None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/annual herb/May–Nov/195–3610	Low potential to occur. Nearest records are from San Marcos and west of Deluz (SDNHM 2018).
Hordeum intercedens	vernal barley	None/None/3.2	None	Coastal dunes, Coastal scrub, Valley and foothill grassland (saline flats and depressions), Vernal pools/annual herb/Mar–June/15–3280	Low potential to occur. No vernal pools in the project area.
Isocoma menziesii var. *decumbens*	decumbent goldenbush	None/None/1B.2	None	Chaparral, Coastal scrub (sandy, often in disturbed areas)/perennial shrub/Apr–Nov/30–445	Moderate potential to occur. This species tolerates disturbed areas and has been recorded in the City of Oceanside (CDFW 2018).
Iva hayesiana	San Diego marsh-elder	None/None/2B.2	Covered	Marshes and swamps, Playas/perennial herb/Apr–Oct/30–1640	Not expected to occur. No suitable vegetation present.
Juncus acutus ssp. *leopoldii*	southwestern spiny rush	None/None/4.2	None	Coastal dunes (mesic), Meadows and seeps (alkaline seeps), Marshes and swamps (coastal salt)/perennial rhizomatous herb/(Mar)May–June/5–2955	Not expected to occur. No suitable vegetation present.
Lasthenia glabrata ssp. *coulteri*	Coulte's goldfields	None/None/1B.1	None	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/0–4005	Not expected to occur. No suitable vegetation present.
Lepidium virginicum var. *robinsonii*	Robinson's pepper-grass	None/None/4.3	None	Chaparral, Coastal scrub/annual herb/Jan–July/0–2905	Moderate potential to occur. There is suitable coastal scrub habitat in the project area and records in the vicinity (SDNHM 2018).

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Leptosyne maritima	sea dahlia	None/None/2B.2	None	Coastal bluff scrub, Coastal scrub/perennial herb/Mar–May/15–490	Low potential to occur. No records in the immediate vicinity (SDNHM 2018).
Lycium californicum	California box-thorn	None/None/4.2	None	Coastal bluff scrub, Coastal scrub/perennial shrub/(Dec)Mar,June,July,Aug/15–490	Moderate potential to occur. There is suitable coastal scrub habitat in the project area and records in the vicinity (SDNHM 2018).
Microseris douglasii ssp. *platycarpha*	small-flowered microseris	None/None/4.2	None	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; clay/annual herb/Mar–May/45–3510	Low potential to occur. No records in Oceanside (SDNHM 2018).
Myosurus minimus ssp. *apus*	little mousetail	None/None/3.1	None	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/65–2100	Low potential to occur. No vernal pools in the project area.
Nama stenocarpa	mud nama	None/None/2B.2	None	Marshes and swamps (lake margins, riverbanks)/annual / perennial herb/Jan–July/15–1640	Not expected to occur. No suitable vegetation present.
Navarretia fossalis	spreading navarretia	FT/None/1B.1	None	Chenopod scrub, Marshes and swamps (assorted shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/95–2150	Not expected to occur. No suitable vegetation present.
Nemacaulis denudata var. *denudata*	coast woolly-heads	None/None/1B.2	None	Coastal dunes/annual herb/Apr–Sep/0–330	Not expected to occur. No suitable vegetation present.
Nemacaulis denudata var. *gracilis*	slender cottonheads	None/None/2B.2	None	Coastal dunes, Desert dunes, Sonoran desert scrub/annual herb/(Mar)Apr–May/-160–1310	Not expected to occur. No suitable vegetation present.
Nolina cismontana	chaparral nolina	None/None/1B.2	None	Chaparral, Coastal scrub; sandstone or gabbro/perennial evergreen shrub/(Mar)May–July/455–4185	Low potential to occur. The nearest location is approximately 8 miles from the project area (CDFW 2018).
Pentachaeta aurea ssp. *aurea*	golden-rayed pentachaeta	None/None/4.2	None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/annual herb/Mar–July/260–6070	Low potential to occur. No records in Oceanside (SDNHM 2018).

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Phacelia ramosissima var. *austrolitoralis*	south coast branching phacelia	None/None/3.2	None	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); sandy, sometimes rocky/perennial herb/Mar–Aug/15–985	Low potential to occur. All occurrences are south of the project area (SDNHM 2018).
Phacelia stellaris	Brand's star phacelia	None/None/1B.1	None	Coastal dunes, Coastal scrub/annual herb/Mar–June/0–1310	Low potential to occur. No records in Oceanside (CDFW 2018).
Pinus torreyana ssp. *torreyana*	Torrey pine	None/None/1B.2	None	Closed-cone coniferous forest, Chaparral; Sandstone/perennial evergreen tree/N.A./95–525	Not expected to occur. No suitable vegetation present.
Pseudognaphalium leucocephalum	white rabbit-tobacco	None/None/2B.2	None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland; sandy, gravelly/perennial herb/(July)Aug–Nov(Dec)/0–6890	Low potential to occur. No records in Oceanside (CDFW 2018).
Quercus dumosa	Nuttall's scrub oak	None/None/1B.1	Covered	Closed-cone coniferous forest, Chaparral, Coastal scrub; sandy, clay loam/perennial evergreen shrub/Feb–Apr(May–Aug)/45–1310	Low potential to occur. No records in Oceanside (CDFW 2018).
Quercus engelmannii	Engelmann oak	None/None/4.2	None	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/160–4265	Low potential to occur. No records in Oceanside (SDNHM 2018).
Selaginella cinerascens	ashy spike-moss	None/None/4.1	None	Chaparral, Coastal scrub/perennial rhizomatous herb/N.A./65–2100	Low potential to occur. No records in Oceanside (SDNHM 2018).
Senecio aphanactis	chaparral ragwort	None/None/2B.2	None	Chaparral, Cismontane woodland, Coastal scrub; sometimes alkaline/annual herb/Jan–Apr(May)/45–2625	Low potential to occur. All records are south of the project area (SDNHM 2018).
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2	None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; alkaline, mesic/perennial herb/Mar–June/45–5020	Low potential to occur. All records are south of the project area (SDNHM 2018).
Suaeda esteroa	estuary seablite	None/None/1B.2	None	Marshes and swamps (coastal salt)/perennial herb/(May)July–Oct(Jan)/0–15	Not expected to occur. No suitable vegetation present.
Tetracoccus dioicus	Parry's tetracoccus	None/None/1B.2	None	Chaparral, Coastal scrub/perennial deciduous shrub/Apr–May/540–3280	Low potential to occur. This species generally occurs east of Oceanside (SDNHM 2018).

Special-Status Plant Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/State/CRPR)	Oceanside Subarea Plan	Primary Habitat Associations/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur
Viguiera laciniata	San Diego County viguiera	None/None/4.3	None	Chaparral, Coastal scrub/perennial shrub/Feb–June(Aug)/195–2460	Low potential to occur. No records in Oceanside (SDNHM 2018).

APPENDIX D

Special-Status Wildlife Species Potentially Occurring in the Project Area

APPENDIX D
Special-Status Wildlife Species Potentially Occurring within the Biological Study Area

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Amphibians					
Anaxyrus californicus	arroyo toad	FE/SSC	Covered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Low potential to occur. All records in the vicinity are north of the project site along the Santa Margarita River (CDFW 2018).
Spea hammondii	western spadefoot	None/SSC	Covered	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Low potential to occur. No vernal pools in the project area and this species is not included in the CNDDB within the City of Oceanside (CDFW 2018).
Reptiles					
Actinemys marmorata	western pond turtle	None/SSC	Covered	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Not expected to occur. No suitable permanent or intermittent streams, ponds, small lakes, or reservoirs present with adjacent basking sites. No records of this species in the City of Oceanside (CDFW 2018).
Arizona elegans occidentalis	California glossy snake	None/SSC	None	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	Low potential to occur. Project is outside of the desert region and the only record in the City of Oceanside is a historical record from the 1890s (CDFW 2018).
Aspidoscelis hyperythra	orange-throated whiptail	None/WL	Covered	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Moderate potential to occur. Suitable coastal scrub present in the project area.
Crotalus ruber	red diamondback rattlesnake	None/SSC	None	Coastal scrub, chaparral, oak and pine woodlands, rocky grasslands, cultivated areas, and desert flats	Moderate potential to occur. Suitable coastal scrub present in the project area.
Thamnophis sirtalis ssp. *infernalis*	south coast garter snake	None/SSC	None	Marsh and upland habitats near permanent water and riparian vegetation	Moderate potential to occur. Intermittent streams and riparian habitat are present in the project area.

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Birds					
Accipiter cooperii (nesting)	Cooper's hawk	None/WL	Covered	Nests and forages in dense stands of live oak, riparian woodlands, or other woodland habitats often near water	High potential to occur. Suitable riparian woodlands in the project area.
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/PSE, SSC	None	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	Low potential to occur. No suitable wetland habitat in the project area.
Aimophila ruficeps canescens	Southern California rufous-crowned sparrow	None/WL	Covered	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Moderate potential to occur. Suitable coastal scrub habitat present.
Aquila chrysaetos (nesting and wintering)	golden eagle	BCC/FP, WL	Covered	Nests and winters in hilly, open/semi-open areas, including shrublands, grasslands, pastures, riparian areas, mountainous canyon land, open desert rimrock terrain; nests in large trees and on cliffs in open areas and forages in open habitats	Low potential to occur. Only small areas of open habitat in the project area.
Artemisiospiza belli belli	Bell's sage sparrow	BCC/WL	Covered	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Low potential to occur. No records in the City of Oceanside (CDFW 2018) and no chaparral dominated by chamise in the project area.
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	None	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	Low potential to occur. While there is riparian habitat in the project area, there is limited open foraging habitat and all of the CNDDB records in the vicinity are historical (CDFW 2018).
Campylorhynchus brunneicapillus sandiegensis (San Diego and Orange Counties only)	coastal cactus wren	BCC/SSC	Covered	Southern cactus scrub patches	Low potential to occur. No sizable cactus scrub patches in the project area.

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Charadrius alexandrinus nivosus (nesting)	western snowy plover	FT, BCC/SSC	Covered	On coasts nests on sandy marine and estuarine shores; in the interior nests on sandy, barren or sparsely vegetated flats near saline or alkaline lakes, reservoirs, and ponds	Not expected to occur. No suitable shoreline habitat present.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT, BCC/SE	None	Nests in dense, wide riparian woodlands and forest with well-developed understories	Moderate potential to occur. There is potentially suitable riparian habitat associated with the San Luis Rey River in the project area. Records are farther upstream outside of the City of Oceanside (CDFW 2018). No critical habitat in the City (USFWS 2014).
Elanus leucurus (nesting)	white-tailed kite	None/FP	None	Nests in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands	Moderate potential to occur. Suitable grassland, scrub, riparian, and disturbed habitat present and several records in the general vicinity (CDFW 2018).
Empidonax traillii extimus (nesting)	southwestern willow flycatcher	FE/SE	Covered	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Moderate potential to occur. There is suitable riparian habitat in the project area and records along the San Luis Rey River and southeastern end of Whelan Lake (CDFW 2018)
Falco peregrinus anatum (nesting)	American peregrine falcon	FDL, BCC/SDL, FP	Covered	Nests on cliffs, buildings, and bridges; forages in wetlands, riparian, meadows, croplands, especially where waterfowl are present	Not expected to nest in the area. Low potential to forage given how developed the project area is and lack of records in the vicinity (CDFW 2018).
Icteria virens (nesting)	yellow-breasted chat	None/SSC	Covered	Nests and forages in dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush	High potential to occur in the summer only. There is suitable riparian habitat in the project area and records of this species along the U3, U15, and L2B alignments.
Pandion haliaetus (nesting)	osprey	None/WL	Covered	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	Not expected to nest in the area. Low potential to forage. No suitable large freshwater bodies in the project area for foraging.
Passerculus sandwichensis beldingi	Belding's savannah sparrow	None/SE	Covered	Nests and forages in coastal saltmarsh dominated by pickleweed (Salicornia spp.)	Not expected occur. No suitable coastal saltmarsh habitat in the project area.

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Passerculus sandwichensis rostratus (wintering)	large-billed savannah sparrow	None/SSC	Covered	Nests and forages in open, low saltmarsh vegetation, including low halophytic scrub	Not expected to occur. No suitable saltmarsh habitat present.
Pelecanus occidentalis californicus (nesting colonies and communal roosts)	California brown pelican	FDL/SDL, FP	Covered	Forages in warm coastal marine and estuarine environments; in California, nests on dry, rocky offshore islands	Nesting colonies and communal roosts not expected to occur. Project area is not located on the immediate coastline.
Plegadis chihi (nesting colony)	white-faced ibis	None/WL	Covered	Nests in shallow marshes with areas of emergent vegetation; winter foraging in shallow lacustrine waters, flooded agricultural fields, muddy ground of wet meadows, marshes, ponds, lakes, rivers, flooded fields, and estuaries	Not expected to occur. No suitable marsh or shallow lacustrine habitat present.
Polioptila californica californica	coastal California gnatcatcher	FT/SSC	Covered	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	High potential to occur. Suitable coastal sage scrub habitat present and several records throughout the City of Oceanside (CDFW 2018). Observed adjacent to the project area: east of the Fire Mountain facility and southwest of the Mesa pump station facility.
Rallus obsoletus levipes	Ridgway's rail	FE/SE, FP	Covered	Coastal wetlands, brackish areas, coastal saline emergent wetlands	Not expected to occur. No suitable wetland habitat present.
Riparia riparia (nesting)	bank swallow	None/ST	None	Nests in riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with sandy soils; open country and water during migration	Low potential to occur. No habitat with vertical banks, bluffs, or cliffs. There are only historical records of this species along the coast near project area (CDFW 2018).
Setophaga petechia (nesting)	yellow warbler	BCC/SSC	None	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	High potential to occur in the summer only. There is suitable riparian habitat in the project area and records of this species along the U3, U15, and L2B alignments.

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Sialia mexicana	western bluebird	None/None	Covered	Nests in old-growth red fir, mixed-conifer, and lodgepole pine habitats near wet meadows used for foraging	Not expected to occur. No suitable conifer or wetland habitat present.
Sternula antillarum browni (nesting colony)	California least tern	FE/SE, FP	Covered	Forages in shallow estuaries and lagoons; nests on sandy beaches or exposed tidal flats	Not expected potential to occur. No suitable coastal habitat present.
Thalasseus elegans (nesting colony)	elegant tern	None/WL	Covered	Inshore coastal waters, bays, estuaries, and harbors; forages over open water	Not expected potential to occur. No suitable coastal habitat present.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Covered	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	High potential to occur. Suitable riparian habitat present and several records of least Bell's vireo in the project area (CDFW 2018). Observed adjacent to the project area on west side of Sleeping Indian Road.
Fishes					
Eucyclogobius newberryi	tidewater goby	FE/SSC	None	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County, to the mouth of the Smith River	Low potential to occur. There are only historical records of this species in the City of Oceanside--in the downstream stretch of the San Luis Rey River and at the Buena Vista Lagoon, both more coastal than the project area (CDFW 2018).
Mammals					
Antrozous pallidus	pallid bat	None/SSC	None	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	Moderate potential to occur. Suitable habitat for roosting and foraging present.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC	Covered	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Moderate potential to occur. Suitable coastal scrub and grassland habitat present.
Dipodomys stephensi	Stephens' kangaroo rat	FE/ST	Covered	Annual and perennial grassland habitats, coastal scrub or sagebrush with sparse canopy cover, or in disturbed areas	Low potential to occur. Suitable coastal scrub and grassland habitat present, however species is considered extirpated from this area of County.

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Lasiurus xanthinus	western yellow bat	None/SSC	None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Moderate potential to occur. Suitable riparian habitat present.
Leptonycteris yerbabuenae	lesser long-nosed bat	FE/None	None	Sonoran desert scrub, semi-desert grasslands, lower oak woodlands	Low potential to occur. The single record from the City of Oceanside indicates that it likely represents a vagrant male occurrence during migration rather than a range extension for the species (CDFW 2018).
Lepus californicus bennettii	San Diego black-tailed jackrabbit	None/SSC	Covered	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Moderate potential to occur. Suitable grassland, scrub, and disturbed areas present.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC	None	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Low potential to occur. No suitable desert habitat present.
Odocoileus hemionus	mule deer	None/None	Covered	Coastal sage scrub, chaparral, riparian, woodlands, and forest; often browses in open area adjacent to cover throughout California, except deserts and intensely farmed areas	Moderate potential to occur. Suitable coastal sage scrub and riparian habitat present though limited in size.
Perognathus longimembris internationalis	Jacumba pocket mouse	None/SSC	Covered	Desert scrub and sparse sage scrub in areas with fine sandy soils	Low potential to occur. No suitable desert scrub habitat present.
Puma concolor	cougar	None/None	Covered	Scrubs, chaparral, riparian, woodland, and forest; rests in rocky areas and on cliffs and ledges that provide cover; most abundant in riparian areas and brushy stages of most habitats throughout California, except deserts	Low potential to occur. No large expanses of suitable habitat for this wide-ranging species.
Invertebrates					
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	Low potential to occur. No vernal pools present based on field reconnaissance and CNDDB data (CDFW 2018).

Special-Status Wildlife Species Potentially Occurring in the Project Area

Scientific Name	Common Name	Status (Federal/ State)	Oceanside Subarea Plan	Habitat	Potential to Occur
Branchinecta sandiegonensis	San Diego fairy shrimp	FE/None	Covered	Vernal pools, non-vegetated ephemeral pools	Low potential to occur. No vernal pools present based on field reconnaissance and CNDDB data (CDFW 2018).
Euphydryas editha quino	quino checkerspot butterfly	FE/None	Covered	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include *Plantago erecta, Antirrhinum coulterianum, and Plantago patagonica* (Silverado Occurrence Complex)	Low potential to occur. Quino checkerspot butterfly records are farther inland than the project area.
Panoquina errans	wandering skipper	None/None	Covered	Saltmarsh	Not expected to occur. No suitable saltmarsh habitat present.
Streptocephalus woottoni	Riverside fairy shrimp	FE/None	Covered	Vernal pools, non-vegetated ephemeral pools	Low potential to occur. No vernal pools present based on field reconnaissance and CNDDB data (CDFW 2018).

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